CHAPTER 1
INTRODUCTION

1-1. PURPOSE AND SCOPE

a. This manual is a compilation of tables and charts designed for use in computing meteorological messages for the artillery, including ballistic and computer messages, radiological fallout prediction, and messages for transmitting data to Air Weather Service units. These tables and charts apply to all types of ballistic meteorological observations by electronic met sections using radiosondes. Use of this manual in the computation of messages is described in FM 6-15, *Artillery Meteorology*.

b. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to **Commandant, United States Army Field Artillery School, ATTN: ATSF-CF-R, Fort Sill, Oklahoma 73503.**

★ c. *FM 6-16, Tables for Artillery Meteorology,* has been revised into a set of four field manuals. The set includes:

❑ **FM 6-16**	*Tables for Artillery Meteorology (Electronic) Ballistic Type 3 and Computer Messages.*
❑ **FM 6-16-1**	*Tables for Artillery Meteorology (Sound Ranging) Messages.*
❑ **FM 6-16-2**	*Tables for Artillery Meteorology (Visual) Ballistic Type 3 and Computer Messages and Limited Surface* Observations.
❑ **FM 6-16-3**	*Tables for Artillery Meteorology (Electronic and Visual) Type 2 Messages.*

1-2. DESCRIPTION OF TABLES AND CHARTS

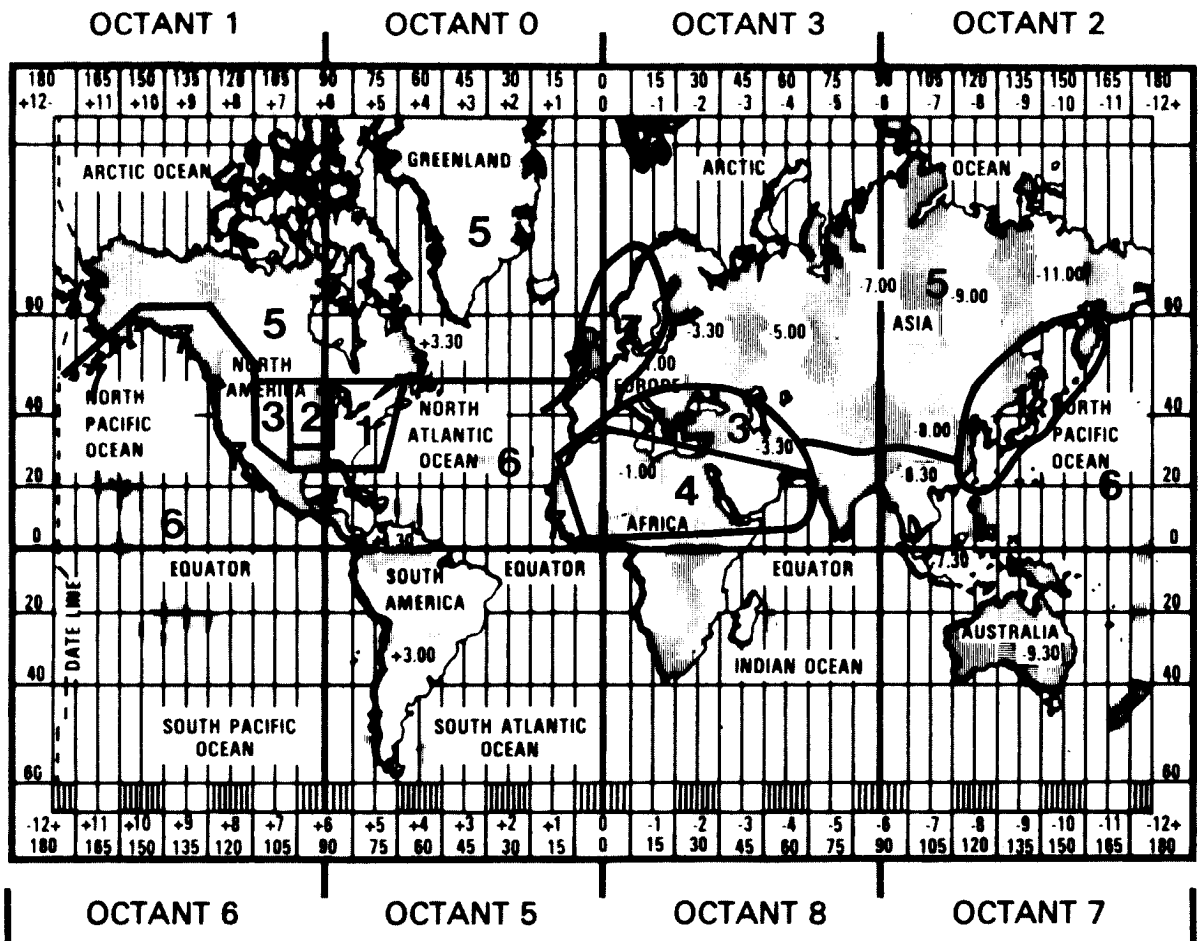
The tables and charts contained in this chapter are presented in sections I and II as follows:

a. *Section I, General Tables and Charts for Meteorological Messages.* These tables and charts are used in computing data for both electronic ballistic and computer meteorological messages.

b. *Section II, Tables for Type 3 Messages, Ballistic Messages for Surface-to-Surface Trajectories.* These tables include the weighting factors and the weighted quantities for density, winds, and temperatures pertaining to all artillery weapons firing at terrestrial targets and tables for standard conditions at ballistic and computer zone midpoints.

1-3. TIME ZONES, GLOBAL OCTANTS, AND CLIMATIC REGIONS

Figure 1-1 divides the world into time zones, global octants, and climatic regions, used in the heading of meteorological messages.



Time is calculated from the meridian of Greenwich. The middle of the zero time zone passes through Greenwich with its east and west limits 7°30′ on each side. Each 15 degree zone east and west of the initial zone represents one hour of time. The number of hours that must be added to or subtracted from local standard time to give Greenwich time is indicated for each zone.

1. Political boundaries in the various countries have caused modifications of the time zones. The vertical lines and clear sections are used to show to which zones these divisions belong. Where a half hour difference is legal, horizontal lines are used. Where no zone system have yet been adopted, the area is represented by small dots. Where no legal time has been established, the larger dots are used. Variations from zone time are given in hours and minutes.

2. The seven climatic regions of the Northern Hemisphere are indicated and identified by the large black numbers 1 through 7.

3. Global octant is indicated by bold N-S, E-W lines and octant identification.

★ Figure 1-1. Time Zones, Global Octants, and Climatic Regions